




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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,147	01/23/2004	Anurag Gupta	20040126-1	8140
22879	7590	12/08/2004	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			BLACKMAN, ROCHELLE ANN J	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/764,147	Applicant(s) GUPTA ET AL.	
	Examiner Rochelle Blackman	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 12-16, 23-25 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 12-16, 23-25 and 27-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-5, 12-16, 23-25, and 27-30 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 5, 12, 13, 16, 23-25, 27-30 are rejected under 35 U.S.C. 102(e) as being anticipated by McGettigan et al. (U.S. Patent No. 6,795,243).

McGettigan discloses a method (see function of elements in FIGS. 1-8) for enhancing contrast in a digital projector, comprising: positioning a first optical component (12) and a second optical (22) component along a light path (41), said first optical component and said second optical component being separated by a gap (24); and sealing a perimeter of said gap with a sealant (26), said sealant being positioned around said light path (see location of 26); further comprising: evacuating said gap to provide substantially a vacuum in said gap (see col. 3, line 65 to col. 5, line 6 - sealing

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air gap 24 with seal 26 and isolating air gap 24 from ambient atmosphere is considered to be providing a "vacuum"); wherein said sealant is positioned substantially along a perimeter of at least one of said first and second optical components (see location of 26); wherein said gap is filled with air (see col. 3, line 65 to col. 4, line 6); a system (see FIGS. 1-8) for enhancing contrast in a digital projector, comprising: a first optical component (12) and a second optical component (22) positioned along a light path (41) and being separated by a gap (24); and a sealant (26) adapted to seal said gap substantially along a perimeter of said gap, said sealant being positioned around said light path (see location of 26); wherein said gap is evacuated to provide substantially a vacuum (see col. 3, line 65 to col. 5, line 6 - sealing air gap 24 with seal 26 and isolating air gap 24 from ambient atmosphere is considered to be providing a "vacuum") in said gap; wherein said sealant is positioned along a perimeter of at least one of said first and second optical components (see location of 26); wherein said gap is filled with air (see col. 3, line 65 to col. 4, line 6); a system (see FIGS. 1-8) for enhancing contrast in a digital projector, comprising: a first optical component (12) and a second optical component (22) positioned along a light path (41) and being separated by a gap (24); and means for sealing said gap substantially along a perimeter of said gap (26), said means for sealing being positioned around said light path (see location of 26); wherein said gap is evacuated to provide substantially a vacuum (see col. 3, line 65 to col. 5, line 6 - sealing air gap 24 with seal 26 and isolating air gap 24 from ambient atmosphere is considered to be providing or creating a "vacuum") in said gap; a system (FIGS. 1-8) for enhancing contrast in a digital projector, comprising: a first optical

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component (12) and a second optical component (22) positioned along a light path (41) and being separated by a gap (24); and means for restricting airflow through said gap (26), said gap having one of air and a substantial vacuum therein (see col. 3, line 65 to col. 5, line 6 - sealing air gap 24 with seal 26 and isolating air gap 24 from ambient atmosphere is considered to be providing or creating a "vacuum"); a digital projector (see FIG. 4), comprising: at least two optical components (12, 22) positioned along a light path (41); a gap (24) formed between two of said optical components; and a sealant (26) adapted to seal said gap substantially along a perimeter of said gap, said sealant being positioned around said light path (see location of 26); wherein said gap is evacuated to provide substantially a vacuum (see col. 3, line 65 to col. 5, line 6 - sealing air gap 24 with seal 26 and isolating air gap 24 from ambient atmosphere is considered to be providing a "vacuum") in said gap.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 12-16, 23-25, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawano et al. (U.S. Patent No. 6,795,243) in view of McGettigan et al. (U.S. Patent No. 6,795,243).

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Kawano discloses a method (see function of elements in FIG. 3) for enhancing contrast in a digital projector, comprising: positioning a first optical component (61) and a second optical component (50) along a light path (see arrows and C2 in FIG. 3), said first optical component and said second optical component being separated by a gap (see location of 64); and sealing a perimeter of said gap with a sealant (64); wherein said first optical component is a digital micro-mirror device cover plate (61) and said second optical component is a total internal reflection prism (50); "wherein said sealant is positioned substantially along a perimeter of at least one of said first and second optical components (see location of 64 relative to 50 and 61); wherein said gap is filled with a fluid"(see 64 of FIG. 3); a system (see FIG. 3) for enhancing contrast in a digital projector, comprising: a first optical component (61) and a second optical component (50) positioned along a light path (see arrows and C2 in FIG. 3) and being separated by a gap (see location of 64); and a sealant (64) adapted to seal said gap substantially along a perimeter of said gap; wherein said first optical component is a digital micro-mirror device cover plate (61) and said second optical component is a total internal reflection prism (50), wherein said sealant is positioned along a perimeter of at least one of said first and second optical components (see location of 64 relative to 50 and 61); a system (see FIG. 3) for enhancing contrast in a digital projector, comprising: a first optical component (61) and a second optical component (50) positioned along a light path (see arrows and C2 in FIG. 3) and being separated by a gap"(see 50 and 61 of FIG. 3); and means for sealing said gap substantially along a perimeter of said gap (see location of 64 relative to 50 and 61); a system (see FIG. 3) for enhancing contrast in a

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digital projector, comprising: a first optical component (61) and a second optical component (50) positioned along a light path (see arrows and C2 in FIG. 3) and being separated by a gap (see location of 64); and means for restricting airflow through said gap (see function of 64); a digital projector (see col. 1, lines 17-19), comprising: at least two optical components (50 and 61) positioned along a light path (see arrows and C2 in FIG. 3); a gap (see location of 64) formed between two of said optical components (50 and 61); and a sealant (64) adapted to seal said gap substantially along a perimeter of said gap.

Kawano does not appear to disclose "said sealant being positioned around said light path; means for sealing being positioned around said light path; evacuating said gap to provide substantially a vacuum in said gap; said gap is evacuated to provide substantially a vacuum in said gap; said gap having one of air and a substantial vacuum therein".

McGettigan teaches providing said sealant being positioned around said light path/ means for sealing being positioned around said light path (see function of 26); evacuating said gap to provide substantially a vacuum in said gap/ said gap is evacuated to provide substantially a vacuum in said gap/ said gap having one of air and a substantial vacuum therein (also see function of 26 and see col. 5, lines 4-6 – sealing air gap 24 with seal 26 and isolating air gap 24 from ambient atmosphere is considered to be providing or creating a "vacuum").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to position the sealant or means for sealing "around" the "optical

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path” and substantially provide a “vacuum” in the gap of the “method”/ “system”/ “digital projector” of the Kawano reference, as taught by McGettigan in order to isolate the gap from ambient atmosphere, thus enhancing the performance of the “optical components” of the “method”/ “system”/ “digital projector” and minimizing performance degradation of the “optical components” due changes in temperature and moisture content (see col. 1, lines 31-34 and col. 5, lines 4-6).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rochelle Blackman whose telephone number is (571) 272-2113. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RB


JUDY NGUYEN
PRIMARY EXAMINER